Research Journal of Finance and Accounting www.iiste.org
ISSN 2222-1697 (Paper) ISSN 2222-2847 (Online)
Vol 3, No 2, 2012

Use of Trade Credit in Nigeria: A Panel Econometric Approach

Ojenike Joseph Olusola* Olowoniyi Adeyemi Olusola
Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria
*E-mail of corresponding author: jojenike@gmail.com

Abstract
This study examines the determinants of trade credit use by randomly sampled quoted firms in Nigeria. Panel data framework was fitted to the secondary data obtained from 70 sampled firms for the period 2000-2009. The results indicate that trade credit use is influenced by depreciation provision, sales value, institutional loan, tangibility and current assets of non financial firms. Firms should endeavour to readjust their financial structure in order to benefit from the advantages of using trade credit.

Keywords: Trade credit, Account payable, Panel data, Nigeria.

1. Introduction

Trade credit represents a substantial component of firms' liabilities and assets as well as a reliable source of funds for most firms in developed countries. This is because trade credit is primarily short-term. Theoretical evidence from transactions-cost theory indicates that trade credit reduces the costs of paying a supplier for multiple deliveries by cumulating the financial obligations from these deliveries into a single period payment. This arrangement allows the firm to distinguish the uncertain delivery schedule from a more predictable payment cycle. This allows the firm to manage its inventory more efficiently.

In a financially inefficient working environment, and tightened credit and monetary policies, firms may have to seek alternative sources of external financing and, trade credit constitutes one of such alternative sources. But despite the potential importance of trade credit, limited attention has been paid to its role and use, especially in developing countries such as Nigeria. Similarly, there has been an inconclusive debate in the current finance literature that trade credit is either a complement or substitute to bank credit. That is, whether trade credit facilitates access to bank credit or does it replace bank credit as a source of external finance.

Finance is very vital to the management of any organization. All the functional activities of companies such as marketing, production, purchasing, personnel, etc requires the use of money. It is an applied field of management in that it borrowed knowledge from the various fields of management such as marketing, accounting, economics etc to the management of fund. As a discipline, it has developed its own theory; today it draws heavily on the work of economist and uses many economic tools. Finance also uses accounting information to make decisions that helps an organization in achieving its objectives though most data provided by accounting are historical. Thus, while accounting deals with data collection with a view to recording accurately in reporting business transactions, finance is a managerial decision making process.

In general, any business tends to have two major expenditures. First, there are the frequent, relatively small expenditure such as on wages, raw materials and utilities. Second, there are expenditures that less often but require major cash outflows, such as the cost of buying production equipment and the cost of building manufacturing plants. Sometimes, business managers can control the timing of expenditures; instead of buying an inventory of parts in frequent small amounts, they may be able to buy periodically in large quantities. However, no matter how a business's cash outflows occur, these expenditures are likely to have their own timing pattern, a pattern that will probably not match the outflow of cash from customers. Thus, the business must have adequate financing in order to carry on its operations. More often, the size of operation of most business is largely determined by the level of the firm's financing.

Trade credit is an essential element of business life for most firms in the world, so important that it even has macroeconomic repercussions. Trade credit is even more important in countries where financial markets malfunction, contract enforcement is insecure, and information is scarce, unreliable and asymmetric. For instance, Fisman & Love (2001) find that firms in industries with higher rates of trade credit grow faster in countries with relatively weak financial institutions. Many Sub-Saharan African (SSA) economies may be described in such a way. Ultimately, such conditions impair

manufacturing firms' abilities to efficiently function, invest and grow. In turn, the manufacturing sectors' growth and ability to drive overall economic development is hindered.

When a business is experiencing expansion either in the form of build-up of backlog of orders or establishment of a new plant or branch of the firm, the need for additional financing will occur. No enough cash to meet orders and run the business effectively since customers do not pay until their orders are delivered in most cases. During the order period, cash must be paid out for wages, spare parts and other overhead expenses like rents of business premises. The business needs to find a way of obtaining this money to pay its operating expenses.

The company may also be in need of more capital to expand its activities especially where the company is hitherto operating on such a small scale that it has to put up with many inefficiencies that cut their profit. They may not have enough fund to buy spare parts wholesale, they may have to buy through middlemen at a cost of 30% to 50% above wholesale. Lack of adequate and access to financing may be keeping business small even when there is business ideas, but not yet a good business.

In their survey of the reasons for the existence of trade credit, Schwartz & Whitcomb (1979) identify two such imperfections. The first is the existence of ceilings on interest rates, and the second is the fact that information is costly to collect and that the cost differs among providers of finance. Once there are ceilings on the interest rates which financial intermediaries can charge and those ceilings are binding, then there must be disequilibrium in credit rationing. That is, some firms that require funds will be unable to obtain them from a financial intermediary. In such a situation it may be optimal for suppliers to extend finance to buyer firms through trade credit. This allows the buyer firm (debtor) to achieve a more satisfactory level of gearing and allows the supplier firm (creditor) to continue selling its products and, in so doing earn higher implicit rate of return than was available through the controlled interest rates available from financial intermediaries.

Therefore, whether the provision of trade credit does indeed increase when monetary policy tightens is still an issue to discuss. If it does, this support the view that trade credit is more readily available when conditions become adverse, i.e. when firms do not have access to institutional credit financial but it also provides evidence that there is a bank lending channel. The willingness to offer trade credit is only one side, its counterpart in the willingness to take it up demonstrates that firms do not have other external funds higher up the pecking order to rely upon. If there is more trade credit offered and firms are making use of it, it is because bank lending is constrained or tightened.

Thus, the goal of this research is to examine the determinants of trade credit use among non financial firms in Nigeria. In general, there has been dearth of literature on the trade credit use in Nigeria. This study will therefore provide an insight into the factors influencing the use of trade credit in Nigeria.

Evidence from financing-advantage theory as reviewed by Cole (2010) shows that a supplier of trade credit has an informational advantage over a bank lender in assessing and monitoring the creditworthiness of its customers. This in turn gives the supplier a cost advantage in lending to its customers. The supplier also has a cost advantage in repossessing and reselling assets of its customers in the event of default. By delaying payment through trade credit, customers can ascertain the quality of the supplier's product before paying for such product (Smith, 1987).

Also, evidence from literature (e.g Biais & Gollier, 1997) indicates that suppliers have private information about their customer and that trade credit alleviates information asymmetries that otherwise would preclude financing of positive net present value projects. Burkart & Ellingsen (2004) stressed that the information advantage derives from the transaction by which the supplier provides inputs to its customer is derived from the cash that is easily diverted but input supplies are not. Further, this may enhance investment, leading banks to increase their lending to the customer, as well. Thus, trade credit has the advantage of being a complement to bank credit.

When the conventional financial institutions restrict credit, those firms relying on intermediated finance are forced to use trade credit. Given that trade credit terms remain constant over time, during recessions and monetary contractions, trade credit finance may become a relatively cheaper source of funds for some firms (Ng et al, 1999). It is this imperfect substitutability of trade credit and institutional finance that inform this study to observe the systematic differences in the use of trade credit among Nigerian firms. Therefore, the increase in the demand for trade credit as a source of finance during monetary and economic meltdown as being experienced globally now will provide a test for the existence of a credit

channel of monetary policy transmission. This is particularly so when firms with direct access to capital market "help out" firms who are reliant on credit from banks by extending more trade credit when times are hard.

More importantly, there has been very little study on the firm's access and use of trade credit as a source of short-term financing in Nigeria. The few studies reviewed made use of only one year data and hence they are confined to cross-sectional analysis. This study will expand the frontier of knowledge on trade credit usage by investigating and assessing the applicability of trade credit among Nigerian firms. In addition, the present study will be based on a 10-year data and will employ panel-data methods in its analysis. In this way, both cross-section variation and variation over time will be taken into account simultaneously.

Also, previous studies suffer from the meager use made of the survey data to create explanatory variables. The lack of explanatory variables in turn makes discrimination between firm size effects and promotion or formal status of the firm impossible. Therefore, there may be tendency in previous studies to overestimate the association between, for instance, access to trade credit and firm size, or trade credit and ethnic origin of the firm owner.

2. Features/Nature and Benefits of Trade Credit

Trade credit as a form of short-term financing is common to almost all businesses. Trade Credit is one particular type of short-term loans; a loan that is tied to both timing and value to the exchange of goods. If the loan is itself transferable, trade credit may substitute for money. When trade credit receives general acceptance in exchange, trade credit becomes money.

Typically, when trade credit is used, the supplier who is delivering good will simultaneously grant credit to the trader receiving the goods. The loan permits the receiver of the goods to postpone his use of money until the end of the loan period. The arrival of the goods will then complete the exchange. What trade credit does permit is an altering of the date at which money must be used. It allows the exchange of goods to be separated in time and place from the simultaneous exchange of money. Trade credit creates additional cash resources by delaying cash outflows that would otherwise occur at the time of purchase. For this reason, taking full advantage of trade credit for purchasing inventory is an important step in managing payables and improving cash flow.

Trade credit arises from delayed payments between firms. It is a more flexible means of financing and forms the largest source of short-term funds for business firms collectively. In developed economies, most buyers are not required to pay for goods upon delivery but are allowed a short deferment period before payment is due. The firm does not have to sign note, pledged collateral or adhere to a strict payment schedule. During this period, the seller of the goods extends credit to the buyer. Since suppliers are generally more liberal in the extension of credit than are financial institutions, small companies in particular rely on trade credit. In addition, a supplier views occasional delinquent payment with far less critical eyes than does a banker or other lender.. Thus, trade credit from suppliers is a major source of business finance, especially to small companies. It is otherwise called supplier credit or in–kind finance. When a firm customarily buys its supplies and materials on credit from other firms, it records the debt as an account payable. At times, it is found to be a more expensive financing alternative to conventional loans because suppliers have a higher direct cost of funds. These higher costs can take the form of inefficiencies in the collection of payments, while financial intermediaries (banks) enjoy cost advantages due to specialization.

When suppliers can extend credit, a new trade-off emerges. On the other hand, the use of trade credit improves the investment incentive because the supplier lends inputs, which are less easily diverted than cash. Unlike the bank, the supplier can also condition the trade credit limit on the input purchase. On the other hand, the entrepreneur has more diversion opportunities. The entrepreneur may divert cash.

Trade credit is also interesting because it is a good place to look for the effects of relationships and networks. For example, in a world of imperfect information, a supplier may learn about a firm's credit worthiness and future prospects in the course of their ongoing business relationship. Thus, the strength of the ties between a business and its suppliers may play a role in determining the terms upon which trade credit is offered or whether it will be offered at all.

Trade credit facilitates negotiations for improved payment terms in exchange for extending credit. It maintains a continuous supply chain – thereby improving liquidity means and smoother production

from the suppliers. The suppliers may gain access to credit at better rates than they would otherwise enjoy. The firm can increase production more easily using the credit to buy raw materials and finance their operations. The company or organisation can develop closer or even exclusive relations with suppliers who will value being supported in this way. However, credit is not granted to a person or firm who has financial instability or difficulty.

Effective use of trade credit requires intelligent planning to avoid unnecessary costs through forfeiture of cash discounts or the incurring of delinquency penalties. But every business should take full advantage of trade credit that is available without additional cost in order to reduce its needs for capital from other sources.

Available evidence on trade credit poses three broad challenges to economic theory. First, why does trade credit exist at all with a majority of nonfinancial firms simultaneously taking credit from their suppliers and suppliers giving credit to their customers? Second, why does the magnitude of trade credit vary across countries, across categories of firms and overtime? Third, why is trade credit less cyclical than bank credit? (Burkart & Ellingsen 2002)

In the presence of specialized financial intermediaries, it is far from obvious why the exchange of goods is still bundled with credit transactions. When trade credit is cheaper than bank credit, as is often the case, the puzzle is that suppliers are willing to lend. When trade credit is more expensive, the puzzle is that banks are unwilling to lend. Indeed, a sizeable fraction of firms repeatedly fail to take advantage of early payment discounts and thus end up borrowing from their suppliers at annual interest rates above 40%, having already exhausted their bank credit lines (Peteresen & Rajan 1994, 1997).

Why do not banks increase these firms' credit lines instead? A common explanation for trade credit is that suppliers have a monitoring advantage over banks. In the course of business, suppliers obtain information about the borrowers which other lenders can only obtain at a cost as opined by Biais & Gollier (1997) and Jain (2001).

Trade credit or accounts payable is created when a firm purchases goods or services from another firm (supplier) and the price is yet to be paid. Trade credits, also called in-kind finance from suppliers are a major source of business finance especially to small companies.

Trade credits are also created when purchases of raw materials, supplies, or goods for resale are made without signing a formal agreement for the liability.

Trade credit also otherwise referred to as suppliers finance is a wide spread source of short-term financing for business. It arises when a customer is permitted by supplier to delay payment for goods already delivered. It means rather than borrowing money to pay for goods or supplies, the purchaser gets credit directly from the supplier.

Trade credit as a form of short-term financing arises from ordinary business transactions between firms. Recent research has addressed the issues of why, and under what conditions, non-financial firms extend credit to their customers; how terms of sales are established; and how and why customers use trade credit. Explanations recognize that in frictionless, perfect (goods and financial) markets, there are no unique qualities that distinguish, trade credit from other payment arrangement (Ingves 1987); hence, a comprehensive theory must identify market conditions under which buyers and sellers prefer trade credit relative to substitutes such as bank financing, factoring, and cash payment terms and must explain both the seller's willingness to offer credit and on what terms and the buyer's willingness to accept. As such, trade credit decisions are part of a broad set of microeconomic decisions related to management of both accounts receivable and accounts payable.

3. METHOD OF ANALYSIS

Secondary data were sourced for this study. The data were sourced from the Annual Reports and Accounts of the sampled firms and annual publication of the Nigeria Stock Exchange for the period 2000-2009. A random sample of 70 non-financial quoted firms listed on the Nigeria Stock Exchange (NSE) was selected for this study.

This study employs panel data framework to allow for differences in the form of unobserved individual firms effect. The panel data framework makes it possible to allow for differences in the form of unobservable individual country effects. Panel study has a number of advantages over time series or cross-sectional studies. These include its ability to control for individual heterogeneity as well as state

and time invariant variables which are not possible with either time series and cross sectional study (Baltagi 1995). Further, it gives more informative data, more variability, less co-linearity among variables, more degree of freedom and efficiency.

The fixed effect (FE), random effect (RE) and Hausman-test based on the difference between fixed and random effects estimators were conducted. The fixed effect is appropriate if we are focusing on a specific set of firms or countries and our inference is limited to the behaviour of these sets of countries. Although FE is more appropriate, it is often observed that there are too many parameters in the model and thus the possibility of loss of degree of freedom that can be avoided by assuming that the individual effect is random. The random effects (RE) model is an appropriate specification when drawing a sample out of a large population. The test revealed that the random effect is the better estimation method. The panel regression model specified for this study is stated as:

$$Y_{it} = \alpha_0 + \beta_1 X1_{it} + \beta_2 X2it + \beta_3 X3it_{+} \beta_4 X4_{it+}\beta_5 X5_{it} + \beta_6 X6it + \beta_7 X7it_{+} \beta_8 X8_{it+}\beta_9 X9_{it} + \varepsilon_{it} \quad (1)$$

Where

Y= account payable (proxy for trade credit) X1= operating expenses, X2= depreciation, X3= sales value, X4=retained earnings, X5=institutional loan, X6=current asset, X7= inventory, X8=Tangible assets, X9= Size, i = firm i, t= time period

4. Results and Discussion

The result indicates that the mean of trade credit measured by account payable is sufficiently large at an average of 3084%. This indicates high rate/level of trade credit for the sample of listed companies under study. The maximum value of trade credit experienced by the firms is 6400% while the minimum value of trade credit experienced by the firms is zero (0).

The mean of operating expense (15.3%) is relatively low when compared to that of trade credit (3084%). This implies that retained earnings of the sampled firms should be higher. The maximum value/percentage of operating expense incurred by the firms' is 192.94% while the minimum expense is 0 for the sampled firms.

Average value/percentage of depreciation represents about 32.7% with a maximum of about 515% and a minimum of 0%. The relatively low mean value of the firm's depreciation is an indication of low tangible assets available in the firms under study or that the firms do not apply appropriate depreciation policy on their assets.

With respect to sales value (turnover), a mean value/percentage of 127% is obtained. The high mean value/percentage of the sales value indicates high retained earnings for the firm. The maximum for the firms under study is 109%.

Retained earnings have a mean value/percentage of 103% implying low demand for credit because the firms would have enough working capital. A maximum value/percentage of 293% is obtained for the firms under study.

The mean value/percentage of current assets is relatively high and represents 83.8% of the firms total asset. This indicate that firms would be able to meet payment periods of trade credit and take advantage of cheaper cost of fund due to cash discount benefits. The disparity in current asset ranges from 963.4% (maximum value) for some firms to a minimum of 89.9% for others.

The mean value of inventory which represents reasonably liquid assets of the firms is 34.68%. This is relatively low and indicate that trade credit is less secured since a low value of firm's inventory when turned to cash may not be adequate to meet repayment terms. Inventory of the firms under study has a maximum value/percentage of 392.6%.

Tangible asset has a mean value/percentage 637%. This implies that credit suppliers will be willing to extend credit to the firms, the disparity in tangible asset ranged from 1244% maximum value for some firms to a loss of 467% (minimum value) for others.

The firms' size also experienced huge growth of up to 2106% and low growth of 1139%. The larger percentage of firms' size could serve as a disincentive to demand of trade credit by firms.

The standard deviation which measures the level of variation or degree of dispersion of the variables from their mean indicates that the most volatile (least stable) of the explanatory variables is tangible asset with a standard deviation of 1241.5% followed by institutional loan, 588.8% retained earnings 353.5%, size 204.7%, current asset 110.1%, sales value 108.7% and operating expense 22.15%.

From Table 2, it can be observed that all variables display considerable variation between firms justifying the use of panel estimation techniques. The correlation coefficient between accounts payable and other explanatory variables is positive ranging between 0.04 and 0.617. The correlation coefficient between accounts payable and operating expense is 0.0709 showing a direct or positive relationship between operating expenses and accounts payable. The correlation coefficient between depreciation and accounts payable is 0.3492; a coefficient value of 0.0502 exists between sales value and depreciation, 0.0373 is between accounts payable and retained earnings, loan, current assets and inventory are positively correlated with accounts payable and having correlation coefficient of 0.6174, 0.3698 and 0.1285 respectively.

Tangibility and size are positively correlated with account payable with correlation coefficient of 0.25 and 0.126 respectively. All these indicate direct or positive relationship of all the explanatory variables with account payable. Similarly, positive correlations are obtained among most of the explanatory variables. However, negative relationship exists among tangible assets, sales value and retained earnings. Tangible asset is negatively related to both sales value and retained earnings with coefficient of negative 0.0147 and 0.0545 respectively. Also, size is negatively correlated to all but accounts payable variable. Overall, the degree of associations is very weak because the coefficients are very low. However, descriptive statistics and correlation analysis indicate the associate link between variables. They do not necessarily establish a causal relationship even with high coefficients.

The results of the analysis of determinants of trade area it is presented in table 3. The diagnostics of the model such as log likelihood as F-statistics are large and significant indicating the fitness of the model.

The explanatory variables account for about 58% in the variations of trade credit of sampled firms. The result further shows that variables such as depreciation, institution, tangibility and profitability are positive and significant at 5% level. Sales value is however negative but significant at 10%.

The finding shows that a unit change in depreciation value of the firms would increase the trade credit of firms by 49.33 implying a direct relationship between the two variables. A unit change in institutional loan would increase access to trade credit by approximately 13 units. This also shows a direct relationship between the two variables. Similarly a unit increase in tangibility and profit would raise access to credit by approximately 1.5 and 19 respectively. The direction of determinant is negative between sales value and trade credit. A unit increase in sales value would decrease trade credit by 18.8 units.

5. Conclusion

This study examines the determinants of use of trade credit in Nigeria between period 2000-2009. The results reveals that several variables such as depreciation value, sales value, institutional loan, tangibility, profit and the current assets of the firms are the main determinants of trade credit in Nigeria. The result implies that retained earnings of the sampled firms are relatively higher leading to its non significant influence on the use of trade credit. The operating expense incurred by the sampled firms' is also high. Also tangible assets are also observed for the sampled firms. There is a low demand for trade credit because the findings indicate that quoted firms in Nigeria have enough working capital.

References

Biais, B. & Gollier, C. (1997): "Trade Credit and Credit Rationing". Review of Financial Studies 10, 903-937.

Burkart, M. & Ellingsen, T. (2002) "In-kind Finance" Centre for Economic and Policy Research Working Paper No. 3536.

Burkart, M. & Ellingsen T. (2003): "In-Kind Finance. A Theory of Trade Credit" *American Economic Review* 94(3), 569-590,

Cole, R. (2010), "Bank Credit, Trade Credit or No Credit: Evidence from the Surveys of Small Business Finances", SBA office of Advocacy. www.sba.gov/advo

Fisman, R & Love, I. (2003), "Trade Credit, Financial Intermediary Development and Industry Growth" *Journal of Finance*, February 58 (1), 353 – 374.

Ingves S. (1987), "In Aspects of Trade Credit, Stockholm, Sweden"; Economic Research Institute, Stockholm School of Economics

Jain, N. (2001), "Monitoring Cost & Trade Credit". Quarterly Review of Economics and Finance, Spring 41(s), Pp. 89 – 110.

Ng, Chec K., J.K. Smith & Smith, R.L (1999), Evidence on the determinants of credit terms used in interfirm trade, Journal of Finance, 54, 1109 – 1129.

Petersen, M., & Rajan, R. (1994), The benefits of lending relationships: Evidence from small business data. *Journal of Finance*, 46 (1), 3-37.

Petersen, M., & Rajan, R. (1997), Trade credit: Theories and evidence, *Review of Financial Studies* 10 (3), 661–691

Schwartz, R.A. & Whitcomb, D. (1978): Implicit Transfer in the Extension of Trade Credit. In the Channels of Redistribution Through the Financial System. The Grants Economics of Money and Credit, ed. K.E. Boulding and T.F. Wilson, New York: Praeger, 191-208.

Schwartz, R.A. & Whitcomb, D. (1979), "The Trade Credit Decision". In Handbook of Financial Economics ed. J.L. Bicksler, Amsterdam: North Holland, 257-73.

Table 1 Descriptive statistics for dependent and explanatory variables of trade credit (2000-2009)

Variables	Obs	Mean	Std. Deviation	Minimum	Maximum
Act payable	590	30.84238	288.4961	0	6400.44
Operating exp.	590	0.1530526	0.221505	0.000496	1.929429
Depre.	590	0.3266734	0.5736048	0.0033799	5.146725
Sales value	590	1.266313	1.0818884	0.0037121	10.99907
Retained	590	1.029072	3.535103	0.0001725	29.28908
Institut. loan	590	1.581453	5.888131	4.67e-06	95.48665
Current asset	590	0.8382671	1.101706	0.898517	9.634341
Inventory	590	0.3468268	0.4435783	0.0016407	3.926455
Tangible asset	590	6.371828	12.41498	4.67e-06	124.4217
Size	590	15.39443	2.04732	11.58601	21.06977

Table 2 CORRELATION MATRIX OF VARIABLES

	Act	Oper.ex	Depr	Sales	Retained	Inst.oan	Cur.asset	Inventory	Tangible	Size
Act pay	1									
X1	0.0709	1								
X2	0.3492	0.2576	1							
X3	0.0502	0.1986	0.2137	1						
X4	0.0373	0.1196	0.0925	-0.0172	1					
X5	0.6174	0.0445	0.2772	0.0362	0.0657	1				
X6	0.3698	0.3018	0.7715	0.3901	0.0562	0.2817	1			
X7	0.1285	0.4062	0.3310	0.7044	0.0325	0.0870	0.5374	1		
X8	0.2516	0.0185	0.1135	-0.0147	-0.0545	0.3158	0.0873	-0.0151	1	
X9	0.1265	-0.0663	-01882	-0.0472	-0.2355	-0.2179	-0.2123	-0.1598	-0.1052	1

Table 3: Panel regression estimates for the sampled firms

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-49.52560	16.08250	-3.079472	0.0022
Operat Incom	-5.375320	49.19000	-0.10S9277	0.9130
Depre Prov.	49.33406	25.20966	1.956951	0.0509
Sales value	-18.82920	10.19697	-1.846548	0.0654
Retain Earn	0.673181	3.410009	0.197413	0.8436
Inst. Loan	12.91050	4.106240	3.144117	0.0018
Tangibility	1.495734	0.811941	1.842170	0.0660
Proft. Earn	19.14592	4.81820	4.578370	0.0000
Current Asset	35.61204	14.62938	2.434283	0.0153
Current Liab.	0.059134	3.764957	0.015706	0.9875
Size	3.88E-08	6.88E-08	0.563631	0.5733
R-squared	0.576082			
F-statistics	9.036126			
Log likelihood	-3925.662